

ABSTRACT

Production processes at PT. Adiwraksa Atyanta often hampered caused inventory of raw materials, insufficient because warehouse raw-material limited. Limitations warehouse also causes reservations raw materials often done by the number of raw materials, limited. This also raises another problem namely cost reservations become larger. Hence with applying a particular method and will generate ease in procuring supplies raw-material good.

This research talk about supplies raw materials by constraint capacity the warehouse. The purpose of this research is to optimize reservations raw materials mahogany in PT. Adiwraksa Atyanta. Prior to calculation reservations optimum first know about the order a product produced then will be calculation to know needs raw materials optimal with limited the warehouse. Problem solving is done by using the method of Lagrange deterministic. Analysis conducted by comparing the number of reserving before and after the implementation of a method of Lagrange between to another quantity of raw materials will be ordered, the point of reserving back, the frequency of reservations and total cost inventori a year incurred.

The result of reckoning by method Lagrange deterministic obtained total area of 302,4m³ where the value is based on constraint existing point reservations back for raw materials Mahogany performed when supplies raw materials is at the number of 54 m³ where frequency reservations done every 46 days once and total cost supplies per year of Rp.3.411.799.500,-. Thus the results of the calculation with the deterministic method of Lagrange is the optimal solution.

Keywords: inventory, deterministic, constraints, inventory costs.